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OIPE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/051,644B

DATE: 03/11/2003
TIME: 11:38:35

Input Set : A:\Cam-0121.app
Output Set: N:\CRF4\03112003\J051644B.raw

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13 <160> NUMBER OF SEQ ID NOS: 8
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18 <211> LENGTH: 425
19 <212> TYPE: PRT
20 <213> ORGANISM: Artificial Sequence
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23 <223> OTHER INFORMATION: Description of Artificial Sequence: VAP-1 Amino
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30 Val Ala Gln Thr Phe Gly Cys Ser Asn Thr Lys Ile Asn Asp Gln Ala
31 20 25 30
33 Arg Lys Met Phe Tyr Asp Ala His Asn Asp Ala Arg Arg Ser Met Ala
34 35 40 45
36 Lys Gly Leu Glu Pro Asn Lys Cys Gly Leu Leu Ser Gly Gly Lys Asn
37 50 55 60
39 Val Tyr Glu Leu Asn Trp Asp Cys Glu Met Glu Ala Lys Ala Gln Glu
40 65 70 75 80
42 Trp Ala Asp Gly Cys Pro Ser Ser Phe Gln Thr Phe Asp Pro Thr Trp
43 85 90 95
45 Gly Gln Asn Tyr Ala Thr Tyr Met Gly Ser Ile Ala Asp Pro Leu Pro
46 100 105 110
48 Tyr Ala Ser Met Ala Val Asn Gly Trp Trp Ser Glu Ile Arg Thr Val
49 115 120 125
51 Gly Leu Thr Asp Pro Asp Asn Lys Tyr Thr Asn Ser Ala Met Phe Arg
52 130 135 140
54 Phe Ala Asn Met Ala Asn Gly Lys Ala Ser Ala Phe Gly Cys Ala Tyr
55 145 150 155 160
57 Ala Leu Cys Ala Gly Lys Leu Ser Ile Asn Cys Ile Tyr Asn Lys Ile
58 165 170 175
60 Gly Tyr Met Thr Asn Ala Ile Ile Tyr Glu Lys Gly Asp Ala Cys Thr
61 180 185 190
63 Ser Asp Ala Glu Cys Thr Thr Tyr Ser Asp Ser Gln Cys Lys Asn Gly
64 195 200 205
66 Leu Cys Tyr Lys Ala Pro Gln Ala Pro Val Val Glu Thr Phe Thr Met

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67      210      215      220
69 Cys Pro Ser Val Thr Asp Gln Ser Asp Gln Ala Arg Gln Asn Phe Leu
70 225      230      235      240
72 Asp Thr His Asn Lys Leu Arg Thr Ser Leu Ala Lys Gly Leu Glu Ala
73      245      250      255
75 Asp Gly Ile Ala Ala Gly Ala Phe Ala Pro Met Ala Lys Gln Met Pro
76      260      265      270
78 Lys Leu Val Lys Tyr Ser Cys Thr Val Glu Ala Asn Ala Arg Thr Trp
79      275      280      285
81 Ala Lys Gly Cys Leu Tyr Gln His Ser Thr Ser Ala Gln Arg Pro Gly
82      290      295      300
84 Leu Gly Glu Asn Leu Tyr Met Ile Ser Ile Asn Asn Met Pro Lys Ile
85 305      310      315      320
87 Gln Thr Ala Glu Asp Ser Ser Lys Ala Trp Trp Ser Glu Leu Lys Asp
88      325      330      335
90 Phe Gly Val Gly Ser Asp Asn Ile Leu Thr Gln Ala Val Phe Asp Arg
91      340      345      350
93 Gly Val Gly His Tyr Thr Gln Met Ala Trp Glu Gly Thr Thr Glu Ile
94      355      360      365
96 Gly Cys Phe Val Glu Asn Cys Pro Thr Phe Thr Tyr Ser Val Cys Gln
97      370      375      380
99 Tyr Gly Pro Ala Gly Asn Tyr Met Asn Gln Leu Ile Tyr Thr Lys Gly
100 385      390      395      400
102 Ser Pro Cys Thr Ala Asp Ala Asp Cys Pro Gly Thr Gln Thr Cys Ser
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112 <213> ORGANISM: Artificial Sequence
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115 <223> OTHER INFORMATION: Description of Artificial Sequence: VAP-1 cDNA
116 Nucleotide Sequence
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120 ttcggctgct ctaacaccaa gatcaatgac caggctcgta agatgttcta tgaatgtcac 120
121 aatgatgcaa gacgaagcat ggctaaaggg ctgagcccaa acaagtgcgg actcttatct 180
122 ggtggaaga atgtttatga attgaattgg gattgcgaga tggaaacaaa agctcaggaa 240
123 tgggcagacg gatgtccacg ctctttccag acatttgatc caacatgggg gcgaactac 300
124 gcacgtaca tgggatcgat tgcgtatcgc ctccatacgc ctccatcgcg tgttaatggg 360
125 tgggtgtcgg aaattagaac cgtaggacct acggatcctg ataacaagta cactaacagg 420
126 gcaatgttcc gatttgctaa tatggcaaat ggtaaaagctt cagcttttgg atgtgcatac 480
127 gcgttgtcgc caggaaaact atccatcaat tgcatttaca acaagatagg atacatgacc 540
128 aatgctatca tttatgaaaa aggagatgcc tgtaccagtg acgctgtaat caccacctac 600
129 tcagactcac aatgcaaaaaa cggctcttgc tataaggcac ctcaagctcc atcgcttgag 660
130 actttcaciaa tgtgcccttc ggtcaaggac cagtcgggac aggcgcgtca aaactcttgg 720
131 gacaccataa acaatttgcg tacaagcctt gccaaaggac ttgaagctga tggaaatgcc 780
132 gctggagcat ttgcaccaat ggccaagcaa atgccaaaac tggtaaaata cagctgcaca 840

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133 gttgaagcaa acgcgagaac atgggcaaaa ggatgccttt accagcattc aacaagcgca 900
134 cagagaccag gactcgggtga aaatctttat atgatcagca ttaacaacat gcctaaaatt 960
135 caaacccggc aggactcctc aaaggcttgg tggtcaggat tgaaagactt cggagtcggt 1020
136 tctgacaaca ttctgaccca agcaggtttt gatcgtggcg ttggacatta cacacaaatg 1080
137 gcatgggaag gaactactga aattggaagt ttgtgggaga attgtccaac attcacttat 1140
138 tccgtatgcc aatatgggtcc agcgggaaac tacatgaacc aactaatcta taccaagggc 1200
139 tcaccatgca cagctgacgc cgattgccca ggaacccaga catgcagtgt cgctgaagca 1260
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144 <212> TYPE: PRT
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146 <220> FEATURE:
147 <223> OTHER INFORMATION: Description of Artificial Sequence: VAP-2 Amino
148 Acid Sequence
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153 20 25 30
154 Glu Gln Asn Val Trp Asn Asp Val Asp Asp Lys Val Val Glu Ala Leu
155 35 40 45
156 Gly Gly Leu Asp Asp Glu Leu Leu Thr Glu His Val Cys Asn Lys Ser
157 50 55 60
158 Thr Ile Thr Gln Leu Gln Gln Glu Ile Ile Leu Thr Thr His Asn Glu
159 65 70 75 80
160 Leu Arg Arg Ser Leu Ala Phe Gly Lys Gln Arg Asn Lys Arg Gly Leu
161 85 90 95
162 Met Asn Gly Ala Arg Asn Met Tyr Lys Leu Asp Trp Asp Cys Glu Leu
163 100 105 110
164 Ala Ser Leu Ala Ala Asn Trp Ser Thr Ser Cys Pro Gln His Phe Met
165 115 120 125
166 Pro Gln Ser Val Leu Gly Ser Asn Ala Gln Leu Phe Lys Arg Phe Tyr
167 130 135 140
168 Phe Tyr Phe Asp Gly His Asp Ser Thr Val His Met Arg Asn Ala Met
169 145 150 155 160
170 Lys Tyr Trp Trp Gln Gln Gly Glu Glu Lys Gly Asn Glu Asp Gln Lys
171 165 170 175
172 Asn Arg Phe Tyr Ala Arg Arg Asn Tyr Phe Gly Trp Ala Asn Met Ala
173 180 185 190
174 Lys Gly Lys Thr Tyr Arg Val Gly Cys Ser Tyr Ile Met Cys Gly Asp
175 195 200 205
176 Gly Glu Ser Ala Leu Phe Thr Cys Leu Tyr Asn Glu Lys Ala Gln Cys
177 210 215 220
178 Glu Lys Glu Met Ile Tyr Glu Asn Gly Lys Pro Cys Cys Glu Asp Lys
179 225 230 235 240
180 Asp Cys Phe Thr Tyr Pro Gly Ser Lys Cys Leu Val Pro Glu Gly Leu
181 245 250 255

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202 Cys Gln Ala Pro Ser Met Val Lys Asp Asp Gly Gly Ser Phe Gln Cys
203      260      265
205 Asp Asn Ser Leu Val Ser Asp Val Thr Arg Asn Phe Thr Leu Glu Gln
206      275      280
208 His Asn Phe Tyr Arg Ser Arg Leu Ala Lys Gly Phe Glu Trp Asn Gly
209      290      295
211 Glu Thr Asn Thr Ser Gln Pro Lys Ala Ser Gln Met Ile Lys Met Glu
212 305      310      315      320
214 Tyr Asp Cys Met Leu Glu Arg Phe Ala Gln Asn Trp Ala Asn Asn Cys
215      325      330      335
217 Val Phe Ala His Ser Ala His Tyr Glu Arg Pro Asn Gln Gly Gln Asn
218      340      345      350
220 Leu Tyr Met Ser Ser Phe Ser Asn Pro Asp Pro Arg Ser Leu Ile His
221      355      360      365
223 Thr Ala Val Glu Lys Trp Trp Gln Glu Leu Glu Glu Phe Gly Thr Pro
224      370      375      380
226 Ile Asp Asn Val Leu Thr Pro Glu Leu Trp Asp Leu Lys Gly Lys Ala
227 385      390      395      400
229 Ile Gly His Tyr Thr Gln Met Ala Trp Asp Arg Thr Tyr Arg Leu Gly
230      405      410      415
232 Cys Gly Ile Ala Asn Cys Pro Lys Met Ser Tyr Val Val Cys His Tyr
233      420      425      430
235 Gly Pro Ala Gly Asn Arg Lys Asn Asn Lys Ile Tyr Glu Ile Gly Asp
236      435      440      445
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246 <211> LENGTH: 1422
247 <212> TYPE: DNA
248 <213> ORGANISM: Artificial Sequence
250 <220> FEATURE:
251 <223> OTHER INFORMATION: Description of Artificial Sequence: VAP-2 cDNA
252     Nucleotide Sequence
254 <400> SEQUENCE: 4
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256 aatatagaag gcagtggagg aaatgatgag cttcttgagc agaactgtgt gaacgatgta 120
257 gacgacaagg ttgtagaagc acttggtgtg cttgatgatg aactgctaac cgaacatgaa 180
258 tgaacaaat caacgatcac tcagctacag caggagatca tcttgacaac ccacaatgaa 240
259 ttacgaagat cattggcttt cggaagaacaa agaaacaaga gaggtctcat gaacggtgcg 300
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261 acctcctgcc ctacagcactt tatgccgcaa tcggtacttg gctccaacgc tcagcttttt 420
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263 aagtatttgt ggcagcaagg tgaagaaaaa ggcaatgagg atcagaaaaa tagattctat 540
264 gccagacgaa attattttgg atgggcaaac atggcaaaag gaaaaacata tcgagttgga 600
265 tgctcgtata ttatgtgcgg cgacggtgaa tctgcacttt tcacttgtct ttataacgaa 660
266 aaagcccaat gcgaaaaaga aatgatttac gaaaatggaa aaccctgctg tgaggataaa 720
267 gactgtttca catatccagg atcaaaatgt ttagtacctg aaggattatg tcaagacct 780

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268 tctatgtgtaa aggatgatgg aggaagtttc caatgtgata actcccttgt gtcagatgtc 840
269 accgcgaatt tcacttttggg gcaacacaaat ttttatagat ctogtcttgc aaaaggtttt 900
270 gaatggaatg gagaacacaa cacttcccag ccaaaggcta gtcaaatgat caaaatggag 960
271 tatgactgca tgttggaaacg gtttgacaaa aactgggcaa ataattgcgt ttttgacac 1020
272 tcggcacatt acgaaagacc gaatcagggt cagaatctct acatgagttc tttctcaaac 1080
273 cctgataccta gaagccttat acatacggcc gtcgagaaat ggtggcagga attggaggag 1140
274 ttcggtactc caattgataa cgttctgaca cccgaattgt gggatttgaa agggaaagcg 1200
275 ataggacatt acactcagat ggccctgggat cgtacttacc gtcttggttg tggaatcgca 1260
276 aactgtccga agatgtcgta cgtggtttgt cactatgggc cagcaggcaa cagaaagaac 1320
277 aataaaatct atgaaatcgg ggtacccctgc gaagtgcgat atgattgccg gattggaaca 1380
278 gattgtgaaa agacaacttc tttatgtgtg atctcaaaat aa 1422
281 <210> SEQ ID NO: 5
282 <211> LENGTH: 218
283 <212> TYPE: PRT
284 <213> ORGANISM: Artificial Sequence
286 <220> FEATURE:
287 <223> OTHER INFORMATION: Description of Artificial Sequence:Clustal W
288 Alignment of VAP-1, VAP-2, and Selected Other
289 Nematode VA Proteins.
291 <400> SEQUENCE: 5
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293 1 5 10 15
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296 20 25 30
298 Thr Asp Lys Asp Arg Gln Ala Phe Leu Asp Phe His Asn Asn Ala Arg
299 35 40 45
301 Arg Arg Val Ala Lys Gly Val Glu Asp Ser Asn Ser Gly Lys Leu Asn
302 50 55 60
304 Pro Ala Lys Asn Met Tyr Lys Leu Ser Trp Asp Cys Ala Met Glu Gln
305 65 70 75 80
307 Gln Leu Gln Asp Ala Ile Gln Ser Cys Pro Ser Ala Phe Ala Gly Ile
308 85 90 95
310 Gln Gly Val Ala Gln Asn Val Met Ser Trp Ser Ser Ser Gly Gly Phe
311 100 105 110
313 Pro Asp Pro Ser Val Lys Ile Glu Gln Thr Leu Ser Gly Trp Trp Ser
314 115 120 125
316 Gly Ala Lys Lys Asn Gly Val Gly Pro Asp Asn Lys Trp Asn Gly Gly
317 130 135 140
319 Gly Leu Phe Ala Phe Ser Asn Met Val Tyr Ser Glu Thr Thr Lys Leu
320 145 150 155 160
322 Gly Cys Ala Tyr Lys Val Cys Gly Thr Lys Leu Ala Val Ser Cys Ile
323 165 170 175
325 Tyr Asn Gly Val Gly Tyr Ile Thr Asn Gln Pro Met Trp Gly Thr Gly
326 180 185 190
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331 Cys Glu Asp Gly Leu Cys Thr Lys Gly Pro
332 210 215
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VERIFICATION SUMMARY

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L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date